State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

May 13, 2011

Board of Land and
Natural Resources
Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Research Permit to Scott Godwin, NOAA Office of National Marine Sanctuaries, Papahānaumokuākea Marine National Monument, for Access to State Waters to Conduct Reef Assessment and Monitoring Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument research permit to Scott Godwin, NOAA Office of National Marine Sanctuaries, Papahānaumokuākea Marine National Monument, pursuant § 187A-6, Hawaii Revised Statutes (HRS), chapter13-60.5, Hawaii Administrative Rules (HAR), and all other applicable laws and regulations.

The research permit, as described below, would allow entry and research activities to occur in the Papahānaumokuākea Marine National Monument (Monument), including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Nihoa Island
- Necker Island (Mokumanamana)
- French Frigate Shoals
- Gardner Pinnacles
- Maro Reef
- Laysan Island
- Lisianski Island, Neva Shoal
- Pearl and Hermes Atoll
- Kure Atoll

The activities covered under this permit would occur between July 23, 2011 and August 31, 2011.

The proposed activities are a renewal of work previously permitted and conducted in the Monument.

INTENDED ACTIVITIES

The applicant proposes to conduct reef assessment and monitoring activities throughout the Monument. These efforts would contribute to continuing research providing scientific information needed to support ecosystem approaches to the management of coral reef systems of the Monument. The annual NWHI RAMP (Reef Assessment and Monitoring Program) cruise would conduct quantitative surveys of coral, algae, fish, and non-coral invertebrates throughout the NWHI for the purpose of monitoring the shallow coral reef ecosystems.

The primary research groups of the program are algae, coral and coral disease, invertebrates, and fish. Activities to assess these groups would include rapid ecological assessments of corals, macro-invertebrates, fish, and algae.

While the monitoring would primarily be visual observations and photo documentation, some collections are also being requested. Collections are summarized below:

- One 24 ounce-sized Ziplock bag of algae per REA (monitoring site), when necessary for identification purposes, up to 122 samples total. (see F-2a, attachment A)
- Collections of diseased coral for identification purposes (up to 1 cm each).
- Collections targeting 73 alien invertebrate species for identification purposes (up to 5x5 cm for encrusting species, up to 1 cm length for branching species, whole organism for mobile species), as well as voucher specimens of any new species or new geographic records encountered. (see F-2a, attachment B)

The activities directly support the Monument Management Plan's action plan 3.1.1 – Marine Conservation Science (through strategy MCS-1.2: Continue monitoring of shallow-water coral reef ecosystems to protect ecological integrity).

The activities described above may require the following regulated activities to occur in State waters:

☒ Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
☒ Touching coral, living or dead
☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

REVIEW PROCESS

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March 10, 2011, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Comments received from the scientific community are summarized as follows:

Scientific reviews support the acceptance of this application.

The following concerns were raised. Applicant responses are noted below.

1. Is there a commitment from Bishop Museum to accession specimens collected under this permit?

    - The Applicant states that the Bishop Museum is currently supporting the accession of any marine material under contract NCNM7300-10-08946 with the Papahānaumokuākea Marine National Monument.

Comments received from the Native Hawaiian community are summarized as follows:

Cultural reviews support the acceptance of this application. No concerns were raised.

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g. MMPA, ESA, EA) Yes ☐ No ☒
If so, please list or explain:

- The Department has made an exemption determination for this permit in accordance chapter 343, HRS, and Chapter 11-200, HAR. See Attachment ("DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT RESEARCH PERMIT TO SCOTT GODWIN, NOAA, OFFCE OF NATIONAL MARINE SANCTUARIES, PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT, FOR ACCESS TO STATE WATERS TO CONDUCT REEF ASSESSMENT AND MONITORING ACTIVITIES UNDER PERMIT PMNM-2011-022")

Has Applicant been granted a permit from the State in the past? Yes ☒ No ☐
If so, please summarize past permits:

- The applicant was granted permit PMNM-2010-022 in 2010 to conduct inventory and monitoring studies of alien marine invertebrates. In addition, Randall Kosaki and Elizabeth Keenan from NOAA ONMS PMNM were issued permits to carry out similar monitoring activities in 2007 and 2009 respectively (PMNM-2007-048 and PMNM-

2009-058). Russell Brainard was issued permits for similar monitoring activities in 2006, 2008 and 2010 (DLNR/NWHI06R013, PMNM-2008-062, PMNM-2010-052)

Have there been any a) violations: Yes ☐ No ☒
b) Late/incomplete post-activity reports: Yes ☐ No ☒

Are there any other relevant concerns from previous permits? Yes ☐ No ☒

STAFF OPINION

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for his application and should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Research Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION

The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by DAR staff.

RECOMMENDATION

That the Board authorize and approve a Research Permit to Scott Godwin, NOAA Office of National Marine Sanctuaries, Papahānaumokuākea Marine National Monument, with the following special conditions:

1. This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized activities must be for noncommercial purposes not involving the use or sale of any organism, by-products, or materials collected within the Monument for obtaining patent or intellectual property rights.

2. The permittee may not convey, transfer, or distribute, in any fashion (including, but not limited to, selling, trading, giving, or loaning) any coral, live rock, or organism collected under this permit without the express written permission of the Co-Trustees.

3. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.

4. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.

5. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge.

6. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

Respectfully submitted,

for Administrator

APPROVED FOR SUBMITTAL

WILLIAM J. AILA JR.
Chairperson

Papahānaumokuākea Marine National Monument

RESEARCH Permit Application

NOTE: ***This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).***

ADDITIONAL IMPORTANT INFORMATION:

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.

- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.

- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED
Send Permit Applications to:
Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
nwhipermit@noaa.gov
PHONE: (808) 397-2660 FAX: (808) 397-2662

SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.

F-2a

Papahānaumokuākea Marine National Monument
Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Summary Information

Applicant Name: Loren Scott Godwin
Affiliation: Papahānaumokuākea Marine National Monument

Permit Category: Research
Proposed Activity Dates: July 23-August 20
Proposed Method of Entry (Vessel/Plane): Vessel
Proposed Locations: Nihoa, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island and Midway Atoll(w/ Lisianski Island, Pearl and Hermes Atoll and Kure Atoll as alternates for weather eventualities)

Estimated number of individuals (including Applicant) to be covered under this permit: 18
Estimated number of days in the Monument: 28

Description of proposed activities: (complete these sentences):

a.) The proposed activity would…
conduct ecological assessments employing standardized methods to improve understanding of the spatial and temporal processes influencing the health of coral reef ecosystems throughout the archipelago.

b.) To accomplish this activity we would ….
use proven Rapid Ecological Assessment (REA) methodologies to survey representative sites for fish, coral, macro invertebrates and document benthic habitat types.

c.) This activity would help the Monument by …
providing the information gained from this monitoring activity to resource managers and various public stakeholders to improve decision-making for the long-term conservation and management of coral reef resources within the Papahānaumokuākea Marine National Monument.

Other information or background: In the past decade, increased awareness regarding the declining condition of US coral reefs has prompted various actions by governmental and non-governmental organizations. Presidential Executive Order 13089 created the US Coral Reef Task Force (USCRTF) in 1998 to coordinate federal and state/territorial activities. Subsequently, the Coral Reef Conservation Act of 2000 provided Congressional funding for activities to conserve these important ecosystems, including mapping, monitoring and assessment projects carried out through the support of NOAA's Coral Reef Conservation Program. Numerous collaborations forged among federal agencies and state, local, non-governmental, academic and private partners now support a variety of monitoring activities in Hawai'i.

As part of the Coral Reef Conservation Act mandates, efforts to create structured monitoring began in the Northwestern Hawaiian Islands (NWHI) through the initiation of the NOWRAMP (Northwestern Hawaiian Islands Reef Assessment and Monitoring, later shortened to RAMP) program. Led by the State of Hawaii, US Fish and Wildlife Service, NOAA and several research institutions, efforts to characterize and monitor coral reefs and establish baselines to compare and facilitate monitoring of temporal changes in the ecosystem began. Since 2000, NOAA has conducted annual monitoring cruises to the NWHI, with leadership alternating between PIFSC/CRED and NOS/PMNM.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Godwin, Loren, Scott

Title: Resource Protection Specialist

1a. Intended field Principal Investigator (See instructions for more information):
Loren Scott Godwin

2. Mailing address (street/P.O. box, city, state, country, zip): Papahānaumokuākea Marine National Monument, [redacted]

[redacted]

For students, major professor's name, telephone and email address:

3. Affiliation (institution/agency/organization directly related to the proposed project):
National Oceanic and Atmospheric Administration/National Ocean Service/ Office of National Marine Sanctuaries/ Papahānaumokuākea Marine National Monument

4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):
Cori Kane, Fish Research Diver
Paula Ayotte, Fish Research Diver
Kaylyn McCoy, Fish Research Diver
Brian Hauk, Fish Research Diver
TBD, Fish Research Diver
TBD, Fish Research Diver
TBD, Fish Research Diver
TBD, Fish Research Diver

Jason Helyer, Benthic Research Diver
Holly Bolick, Benthic Research Diver
TBD, Benthic Research Diver
TBD, Benthic Research Diver
TBD, Benthic Research Diver
Adrienne Hopper, NOAA Coxswain
TBD, Coxswain
TBD, Data Manager
TBD, Dive Chamber Operator

Section B: Project Information

5a. Project location(s):

		Ocean Based	
☒ Nihoa Island	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Necker Island (Mokumanamana)	☐ Land-based	☒ Shallow water	☐ Deep water
☒ French Frigate Shoals	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Gardner Pinnacles	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Maro Reef			
☒ Laysan Island	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Lisianski Island, Neva Shoal	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Pearl and Hermes Atoll	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Midway Atoll	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Kure Atoll	☐ Land-based	☒ Shallow water	☐ Deep water
☐ Other			

NOTE: There is a fee schedule for people visiting Midway Atoll National Wildlife Refuge via vessel and aircraft.

Location Description:
Rapid Ecological Assessment (REA) sampling for fishes and benthic flora and fauna will be conducted at six locations: Nihoa, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island and Midway Atoll(w/ Lisianski Island, Pearl and Hermes Atoll and Kure Atoll as alternates). At each location, a stratified random survey design will be employed to sample coral reef habitat. The stratification scheme comprises the combination of three reef zones—fore reef, back reef, and lagoon—and three depth ranges—0 to 6 m, 6 to 18 m, and 18 to 33 m. A sampling 'site' denotes an area of 100 m by 100 m containing coral reef habitat. The target number of sampling sites for each location is estimated as follows:

At each location, sampling sites will be allocated proportionally among reef zone-depth strata according to the amount of coral reef habitat within each stratum. Specific site locations to be sampled within each stratum will be randomly selected from the complete list of stratum sample sites compiled using a Geographical Information System (GIS). A secondary list of alternative sampling sites will also be randomly generated for each stratum. In some situations, a randomly selected site may be determined upon arrival by the field team to be unsuitable for sampling, e.g., non-reef habitat, unsafe sea conditions, etc. In the case of unsuitable habitat, adjacent sampling sites (approximately 100 m in each direction from the original point) will be searched to the extent possible and substituted for the original site if suitable coral reef habitat is located. Sites determined to be unsuitable for REA sampling will be substituted with an alternative site from the secondary sample list.

5b. Check all applicable regulated activities proposed to be conducted in the Monument:

☒ Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
☐ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands
☐ Anchoring a vessel
☐ Deserting a vessel aground, at anchor, or adrift
☐ Discharging or depositing any material or matter into the Monument
☒ Touching coral, living or dead
☐ Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
☐ Attracting any living Monument resource
☐ Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)
☐ Subsistence fishing (State waters only)
☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

6 Purpose/Need/Scope ***State purpose of proposed activities:***
These efforts contribute to continuing research providing scientific information needed to support ecosystem approaches to the management of coral reef systems of the Monument. The use of consistent interdisciplinary methods across this vast region allows for an opportunity to perform comparative biogeographic and ecological analyses of diverse ecological, environmental, and oceanographic gradients. Patterns of variability of fish biomass, coral disease, diversity, and other reef metrics are paramount to assessing habitats in a coral ecosystem such as Papahānaumokuākea Marine National Monument (The Monument).

7. Answer the Findings below by providing information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Monument:

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?
Surveys will be conducted in a manner that brings the divers in very limited direct contact with the natural resources. Fishes, invertebrates, and corals that can be indentified visually will not be collected. In rare instances, there will be algae and invertebrates that cannot be readily identified. Many species of algae and invertebrates require microscopic or histological examination to confirm identification, so very limited numbers of voucher specimens will be collected as necessary to make positive identifications. Additionally, if coral disease is documented a small sample of the infected colony would be collected to ascertain pathology.

These surveys will not occur in the vicinity of any known western or Native Hawaiian archaeological sites within the Monument, and thus are unlikely to impact any such resources. If possible archaeological sites are seen, Global Positioning System (GPS) coordinates for the sites as well as a general description will be taken and provided to Monument staff.

Because of the close relationship between Native Hawaiians and the ocean, the marine life of the NWHI also constitute a living cultural resource whose well-being is integral to the perpetuation of cultural values and practices. Many, if not most, of the species surveyed by the methods outlined in this application are of great cultural significance to Native Hawaiians, in spiritual, religious, nutritional, utilitarian, and other ways. A program such as the RAMP time series, whose goal is to characterize and monitor the Monument's living marine resources, will directly inform traditional managers and Native Hawaiian practitioners of the distribution and abundance of these resources within the Monument.

Finally, all scientists participating in this cruise will receive a Native Hawaiian cultural briefing before departure. In addition, the primary permittee, chief scientist, and other appropriate personnel will consult with the Office of Hawaiian Affairs (OHA) and the Monument's Native

Hawaiian program coordinator on proper conduct while in the NWHI, on cultural sensitivities associated with the proposed activities and locations.

b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects?
The proposed activities are consistent with the terms of the Proclamation in that they will "further understanding of Monument resources and qualities," and will "assist in the conservation and management of the Monument." They are also consistent with the Findings regarding the issuance of permits by the Trustees. Management regulations pertaining to the Monument, such as regulations for the mitigation of disease and alien species transport, are strictly adhered to when conducting operations within the Monument. The proposed activities will provide critical data that will greatly enhance the Monument managers' ability to characterize and understand the coral reef ecosystems within the Monument. The scientific methods to be used on this cruise are designed to have minimal, if any, negative effects on the environment. There are no anticipated indirect, secondary or cumulative effects of the proposed methods.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.
The RAMP effort is conducted throughout the archipelago of Hawai'i, which provides for the opportunity of comparison between the populated and geologically younger southeastern islands and the NWHI. The variances generated within a data set are potentially unique to each site due to the abundance and distribution of the organisms present there. Similar tests conducted in the southeastern islands of the Hawai'i archipelago or elsewhere would be of questionable applicability because of fundamental differences in the assemblage structures of marine organisms when compared to the NWHI. Thus, the efficacy of the revised data collection protocols for monitoring in the NWHI cannot be tested anywhere but the NWHI.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?
Annual monitoring surveys are necessary to establish baseline abundances of coral reef organisms, to begin to understand the range of natural spatial and temporal variability that characterizes the ecosystems of the NWHI, and to establish a baseline against which changes due to the effects of large scale, long-term natural and anthropogenic impacts can be compared. These baselines will also be useful in documenting the impacts of episodic or localized natural and anthropogenic perturbations of the environment, such as storm damage, invasive species and vessel groundings. There are to be no adverse impacts on the Monument cultural, natural and historic resources, qualities and ecological integrity from the proposed activities.

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.
The time alloted for this research is the minimum amount of time needed within Monument waters to complete the required work. Due to the considerable size of the Monument and the

transit time between locations, we are only able to survey a subset of islands that represent the broadest characterization of habitat types. The schedule of activities will maximize the operational days alotted aboard the NOAA research vessel Hi'ialakai.

f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.
The Monument staff and their partners involved in conducting the yearly coral reef monitoring have proven themselves capable of collecting monitoring data with no adverse impacts to the natural resources of the Monument. RAMP cruises have been successfully conducted on an annual basis in the NWHI since 2000 in conjunction with NOAA Pacific Islands Fisheries Science Center, Coral Reef Ecosystem Division, the State of Hawaii, and other partners. Team members are experienced divers and highly trained personnel who will be under the guidance of the Chief Scientist (CV attached).

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.
There is an allocation of 30 days at sea aboard Hi`ialakai from NOAA's Office of Marine and Aviation Operations, and the RAMP effort is a line item in the budget of the Monument.

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.
Standardized survey procedures are employed during operations, and are the minimum effort needed to obtain the data. The procedures are designed with the intention of monitoring and assessing the coral reef ecosystem with as little impact as possible to the Monument resources. Through various cruises and reports the methods used have shown to have little impact on the habitat being observed.

i. Has your vessel has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?
Under a separate permit, the Hi'ialakai is outfitted with a mobile transceiver unit that is approved by the NOAA Office of Law Enforcement.

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.
We are not aware of any other factors that would make the issuance of a permit for the activity inappropriate.

8. Procedures/Methods:
In order to properly manage the coral reefs and related waters of the Monument, RAMP cruises utilize several disciplines to monitor the various biota and environments. The primary research areas are listed below with accompanying descriptions.

Benthic Field Survey Methodology

At each survey site, two to three 25 m transect transects are the focal point for the benthic surveys.

Coral and Coral Disease:
Within each of the two transects above, five, 2.5-meter segments are surveyed (beginning at points: 0, 5, 10, 15, and 20 meters), whereby in each segment, all coral colonies whose center falls within 0.5 meters of either side of the transect line are identified to the species level and two planar size metrics collected (i.e., maximum diameter and maximum diameter perpendicular to the maximum diameter). The extent of colony mortality, both recent and old, is also estimated for each colony; special attention is paid to identifying as best as possible the extent of the former live colony. In addition, cases of disease or compromised health are recoded and additional information collected, including type of affliction (bleaching, skeletal growth anomaly, white syndrome, subacute tissue loss, band diseases, necroses, pigmentation responses, algal and fungal infections, as well as other diseases of unknown etiology, and predation), severity of the affliction (mild, moderate, marked, severe, acute), as well as photographic documentation and sometimes tissue samples. Coral tissue samples 1 centimeter in length are collected, catalogued and fixed in buffered zinc-formalin solution for further histopathological analyses.

Line Point Intercept (LPI):
A single diver swims over the lines and assess the benthic elements falling at fixed 20 cm intervals along each transect line. Each such element is tallied and recorded under the following scheme: live coral, recent dead coral, carbonate pavement, coral rubble, sand, rock, turf-algae, macro-algae, invertebrate, and other. Live benthic elements including coral, algae, and invertebrates were identified to the lowest taxonomic level possible. This data is used to provide the basis for quantitative estimates of live coral cover, as well as percent cover of the diverse benthic and substrate components. Species inventories and percent cover will be generated from data collected at each site. After the LPI is complete, the benthic research diver will conduct a qualitative assessment of algal and invertebrate species present within 5-m on either side of the transect line to document additional algal/invertebrate species not recorded during the LPI assessment. If during this phase, a species is encountered that is unidentifiable or potentially a new record there will be a voucher specimen collected.

Fish Survey Methodology:
Non-invasive underwater surveys are used to enumerate the diverse components of diurnally active shallow-water reef fish assemblages. Surveys are replicated at sites within and/or among the various habitat types present around each island or bank. Fish are identified to lowest possible taxa and their size estimated. Resulting data therefore provide information on size structure and provides the basis for estimation of biomass densities by taxa.

From 2000-2008 the primary survey method was a transect-based method. In 2009 methodology was shifted to a Stationary Point Count method. In 2009 both transects and SPC methods were conducted to create conversion metrics to allow for comparison/conversion between methodologies.

Belt transects: A pair of scuba diver-observers conduct parallel swims along three 25 m long transect lines, recording size-class specific (TL) counts of all fishes encountered, to species-level where possible, within visually estimated but defined belt widths: 4 m wide for fishes > 20 cm TL (100 m2 area) on the initial swim-out, and 2 m wide for fishes <20 cm TL (50 m2 area) on the subsequent swim back. Reef ledges and holes are visually searched. Stations are completed on all sides of the island/atoll, weather and sea conditions permitting.

Stationary Point Counts (nSPC): Stationary point counts are the main method now to survey reef fish assemblages. At each site, replicate nSPC surveys are conducted by a pair of divers, surveying adjacent visually-estimated cylinders of 7.5 m radius, centered on the divers. Each nSPC diver records the number, size (TL, to nearest cm), and species of all fishes present or passing through the cylinder in the course of the survey. nSPC surveys consists of 2 components: (i) a 5 minute species listing component – the aim of which is to build a list of species present pr passing through the cylinder; and (ii) an enumeration component, in which each diver records the number and sizes of fishes of those listed species in a series of instantaneous visual sweeps of their cylinder. Where time allows, 2 pairs of nSPC cylinders are surveyed per site per dive. nSPC Survey sites are randomly located with specified habitat strata encompassing all 0-30m hard bottom areas at each surveyed reef -with specific position generated prior to each cruise based on the random-stratified survey design.

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding, as a customized application will be needed. For more information, contact the Monument office on the first page of this application.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary):

Common name:
Macro-Algae Voucher Specimens-Assorted green, red, and brown algae species
Invertebrate Voucher Specimens.

Scientific name:
Macro-Algae-See Attachment A
Invertebrates-See Attachment B

& size of specimens:
Macro-Algae Voucher Specimens- Specimen size equivalent to 24 ounce sample bag
Invertebrate Voucher Specimens - A 5centimeterX5centimeter piece for encrusting forms (e.g. sponges,hydroids, bryozoans, tunicates) or 1centimeter in length for branching forms. Whole organism for mobile species (e.g. crabs, sea stars, worms).

Collection location:
Nihoa, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Midway Atoll (Lisianski Island, Pearl and Hermes Reef, and Kure Atoll as alternates, see page 2)

☒ Whole Organism ☒ Partial Organism

9b. What will be done with the specimens after the project has ended?
Macro-Algae and invertebrate specimens will be deposited at the Bishop Museum, Honolulu, Hawaii

9c. Will the organisms be kept alive after collection? ☐ **Yes** ☒ **No**

• General site/location for collections:
While in the field, all specimens will be kept in a preserved state in the wetlab aboard the NOAA research vessel Hi'ialakai. Algal specimens will be frozen and invertebrate collections will either be frozen or preserved in 95% Ethanol.

• Is it an open or closed system? ☐ Open ☐ Closed
n/a

• Is there an outfall? ☐ Yes ☐ No
n/a

• Will these organisms be housed with other organisms? If so, what are the other organisms?
n/a

• Will organisms be released?
No

10. If applicable, how will the collected samples or specimens be transported out of the Monument?
All specimens will be kept aboard the NOAA research vessel Hi'ialakai and transported back to to Honolulu.

11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:

All specimens will be deposited at Bishop Museum and can be accessed by local researchers from the University of Hawaii, NOAA, US Fish and Wildlife Service and the State of Hawaii.

12a. List all specialized gear and materials to be used in this activity:
Specimens will be collected by the use of hand tools such as scrapers, chisels or snips.

12b. List all Hazardous Materials you propose to take to and use within the Monument:
95% Ethanol, buffered formalin

13. Describe any fixed installations and instrumentation proposed to be set in the Monument:
none

14. Provide a time line for sample analysis, data analysis, write-up and publication of information:
A cruise report will be completed upon return to Honolulu. Monitoring data will be archived on servers loacted at the Monument offices and the NOAA PIFSC, Coral Reef Ecosystem Division

15. List all Applicants' publications directly related to the proposed project:
DeFelice, R.C., D. Minton, and L.S. Godwin. 2002. Records of shallow-water marine invertebrates from French Frigate Shoals, Northwestern Hawaiian Islands, with a note on nonindigenous species. Report to the U.S. Fish and Wildlife Service. Bishop Museum Technical Report No. 23. Contribution No. 2002-01 to the Hawaii Biological Survey

Godwin, L. S. 2002. Rapid ecological assessment of the marine invertebrate fauna of American Samoa and the U.S. Phoenix and Line Islands. Report submitted to the NOAA-NMFS Coral Reef Ecosystem Investigation. 17pp

Godwin, L.S. & N. L. Evenhuis. Marine Molluscs. In: Evenhuis & Eldredge (eds). Natural History of Nihoa and Necker Islands pp. 147-155. Bishop Museum Press 2004. 220 pp.

Godwin L.S. & L. G. Eldredge. Marine Invertebrates. In: Evenhuis & Eldredge (eds). Natural History of Nihoa and Necker Islands pp. 156-177. Bishop Museum Press 2004. 220 pp.

Godwin, S. 2005. Preliminary species inventory for marine invertebrates associated with the coral reef communities of the Northwestern Hawaiian Islands. Report submitted to the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve.

Friedlander, A.M., G. Aeby, R. Brainard, A. Clark, E. DeMartini, S. Godwin, J. Kenyon, R. Kosaki, J. Maragos, and P. Vroom. 2005. The State of Coral Reef Ecosystems in the Northwestern Hawaiian Islands. pp. 270-311. In J. Waddell (ed.), The State of Coral Reef Ecosystems of the United States and the Pacific Freely Associated States: 2005. NOAA Technical Memorandum NOS NCCOS 11. NOAA/NCCOS Center for Coastal Monitoring and Assessment's Biogeography Team, Silver Spring, MD. 522pp.

Castro, P & L.S. Godwin. 2006. First record of coral crabs of the family Tetraliidae (Crustacea: Brachyura) from the Hawaiian Islands. Bishop Museum Occasional Papers. 88:53-55

Godwin, L.S. & H. Bolick. 2006. Inventory of intertidal and shallow sub-tidal marine invertebrates at Kalaupapa National Historic Park. Contribution No. 2006-003 to the Hawaii Biological Survey. 58 pp.

Kenyon J, S. Godwin, A. Montgomery, and R. Brainard 2007. Rare sighting of Acropora cytherea in the main Hawaiian Islands. Coral Reefs 26: 309

Maragos, J., J. Miller, J. Gove, E. Demartini, A. Friedlander, S. Godwin, C. Musburger, M. Timmers, R. Tsuda, P. Vroom, E. Flint, E. Lundblad, J. Weiss, P. Ayotte, E. Sala, S. Sandin, S. McTee, T. Wass, R. Brainard, D. Obura, S. Ferguson, and B. Mundy. 2007. U.S. atolls and low reef islands in the Line and Phoenix Islands, Central Pacific Ocean. Report to the U.S. Coral Reef Taskforce.

Martin J.W., S. Godwin, R. Moffit. 2008. Additions to the decapod crustacean fauna of the Hawaiian Islands, I. A review of the crab genus Sakaila Manning & Holthuis, 1981 (Decapoda, Brachyura, Calappoidea) with a description of a new species from French Frigate Shoals, Northwestern Hawaiian Islands. Zootaxa (In Press)

Godwin, L.S. and I. Baums. 2008. The hermit crab Calcinus isabellae, Poupin, 1997 (Crustacea: Decapoda: Anomura: Diogenidae), a new record for the Hawaiian Archipelago, including a review of the genus Calcinus Dana, 1851 in Hawai'i. Bishop Museum Occasional Papers 100: 52-54

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as "confidential" prior to posting the application.

Lorin Scott Godwin 1-31-2011

Signature Date

SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE BELOW:

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
FAX: (808) 397-2662

DID YOU INCLUDE THESE?

☒ Applicant CV/Resume/Biography
☒ Intended field Principal Investigator CV/Resume/Biography
☒ Electronic and Hard Copy of Application with Signature
☐ Statement of information you wish to be kept confidential
☒ Material Safety Data Sheets for Hazardous Materials

Attachment A. Potential Algal Genera Requiring Voucher Collections

Common Name	Scientific Name		Common Name	Scientific Name
Algae	Caulerpa		Algae	Dasya
Algae	Caulerpella		Algae	Heterosiphonia
Algae	Codium		Algae	Hypoglossum
Algae	Halimeda		Algae	Martensia
Algae	Bryopsis		Algae	Schizoseris
Algae	Derbesia		Algae	Vanvoorstia
Algae	Pseudobryopsis		Algae	Amansia
Algae	Avrainvillea		Algae	Chondria
Algae	Chlorodesmis		Algae	Chondrophycus
Algae	Rhipidosiphon		Algae	Herposiphonia
Algae	Rhipilia		Algae	Laurencia
Algae	Tydemania		Algae	Lophosiphonia
Algae	Udotea		Algae	Neosiphonia
Algae	Palmophyllum		Algae	Polysiphonia
Algae	Phyllodictyon		Algae	Spriocladia
Algae	Cheatomorpha		Algae	Womersleyella
Algae	Cladophora		Algae	Amansia
Algae	Dictyosphaeria		Algae	Tolypiocladia
Algae	Microdictyon		Branched coralline algae	non-geniculate
Algae	Valonia		Crustose coralline algae	
Algae	Acetabularia		Algae	Amphiroa
Algae	Bornetella		Algae	Hydrolithon
Algae	Neomeris		Algae	Jania
Algae	Boodlea		Algae	Mastophora
Algae	Siphonocladus		Algae	Erythrotrichia
Algae	Ventricaria		Algae	Gelidium
Algae	Entocladia		Algae	Pterocladiella
Algae	Ulvella		Algae	Acrosymphyton
Algae	Ulothrix		Algae	Caulacanthus
Algae	Uronema		Algae	Gibsmithia
Algae	Ulva		Algae	Carpopeltis
Algae	Chnoospora		Algae	Halymenia
Algae	Dictyota		Algae	Hypnea
Algae	Distromium		Algae	Kallymenia
Algae	Lobophora		Algae	Predaea
Algae	Padina		Algae	Peyssonnelia
Algae	Stypopodium		Algae	Ahnfeltiopsis
Algae	Asteronema		Algae	Plocamium
Algae	Feladmannia		Algae	Portieria

Algae	Hincksia		Algae	Platoma
Algae	Sargassum		Algae	Gracilaria
Algae	Turbinaria		Algae	Actinotrichia
Algae	Hydroclathrus		Algae	Galaxaura
Algae	Sphacelaria		Algae	Ganonema
Algae	Sporochnus		Algae	Scinaia
Algae	Bangia		Algae	Tricleocarpa
Algae	Porphyra		Algae	Liagora
Algae	Asparagopsis		Algae	Trichogloea
Algae	Aglaothamnion		Algae	Trichogloeopsis
Algae	Anotrichium		Algae	Yamadaella
Algae	Antithamnion		Algae	Stylonema
Algae	Centroceras		Algae	Gelidiopsis
Algae	Ceramium		Algae	Gloiocladia
Algae	Corallophila		Algae	Lomentaria
Algae	Crouania		Algae	Botryocladia
Algae	Griffithisa		Algae	Chrysymenia
Algae	Haloplegma		Algae	Coelarthrum
Algae	Lejolisea		Algae	Coelothrix
Algae	Ptilothamnion		Algae	Halichrysis
Algae	Spryridea		Blue green algae	cyanobacteria
Algae	Wrangelia		Turf algae	

Attachment B. Potential Marine Invertebrate Requiring Voucher Collections

PHYLUM PORIFERA	
Class Calcarea	
Family Heteropiidae	
	Heteropia glomerosa Bowerbank, 1873
Class Demospongiae	
Order Hadromerida	
Family Suberitidae	
	Suberites zeteki de Laubenfels, 1936
Family Chalinidae	
	Sigmadocia cf. caerulea Hechtel, 1965
Family Niphatidae	
	Gelloides fibrosa Wilson, 1925
Order Poecilosclerida	
Family Mycalidae	
	Mycale grandis Thiele, 1903
Family Raspailidae	
	Echinodictyum asperum Ridely and Dendy, 1886
Family Dysideidae	
	Dysidea sp.
PHYLUM CNIDARIA	
Class Hydrozoa	
Family Halocordylidae	
	Pennaria disticha
Family Bougainvilliidae	
	Bouganvillia ramosa van Beneden, 1844
Family Sertulariidae	
	Dynamena crisioides Lamouroux, 1824
Class Anthozoa	
Family Diadumenidae	
	Diadumene leucolena Verrill, 1866
	Diadumene lineata (Verrill, 1869)
Subclass Octocorallia	
	Carijoa riisei Duchassaing & Michelotti, 1860
PHYLUM ANNELIDA	
Family Sabellidae	
	Sabellastarte spectabilis Grube, 1878
	Branchiomma nigromaculata Baird, 1865
Family Serpulidae	

	Hydroides elegans Haswell, 1883
	Hydroides dirampha Morch, 1863
	Hydroides crucigerus Morch 1863
	Pomatoleios kraussii Baird, 1865
	Pomatoceros cf. minutus Rioja, 1941
	Salmacina tribranchiata Moore, 1923
	Serpula vermicularis Linnaeus, 1767
	Serpula cf. watsoni Willey, 1905
Family Spirorbidae	
	Eulaeospira orientalis Pillai, 1960
	Simplicaria pseudomilitaris Thiriot-Quievreux, 1965
	Janua pagenstecheri Quatrefages, 1865
	Neodexiospira preacuta Vine, 1972
	Neodexiospira foraminosa Moore and Bush, 1904
	Pileolaria militaris Claparede, 1868
	Circeus cf. amoricana Saint-Joseph, 1894
PHYLUM MOLLUSCA	
Family Vermetidae	
	Vermetus alii Hadfield & Kay, 1972
Class Gastropoda	
	Hipponix australis Lamarck, 1819
	Crucibulum spinosum (Sowerby, 1824)
	Hiponix sp.
Class Bivalvia	
	Chama macerophylla Gmelin, 1791
	Chama fibula Reeve, 1846
PHYLUM CRUSTACEA	
Class Cirrepedia	
Order Thoracica	
Family Balanidae	
	Balanus amphitrite Darwin, 1854
	Balanus eburneus Gould, 1841
	Balanus trigonus Darwin, 1854
	Megabalanus californicus Pilsbry, 1916
	Megabalanus tanagrae Pilsbry, 1928
	Megabalanus peninsularis Pilsbry, 1916

Family Chthamalidae	
	Chthamalus proteus
PHYLUM CRUSTACEA	
Order Amphipoda	
Family Caprellidae	
	Caprella acutifrons
Family Gammaridae	
	Ericthonius brasiliensis Dana, 1853
	Jassa falcata Sexton & Reid, 1951
Class Decapoda	
Order Brachyura	
Family Grapsidae	
	Pachygrapsus fakaravensis Rahtbun, 1907
	Metopograpsus oceanicus (Jacquinot, 1852)
	Nanosesarma minutum (De Man, 1887)
Family Xanthidae	
	Glabropilumnus seminudus (Miers, 1884)
Class Stomatopoda	
	Gonodactylaceusus mutatus Lanchester, 1903
PHYLUM PYCNOGONIDA	
	Anoplodactylus sp.
PHYLUM ECHINODERMATA	
Class Ophiuroidea	
	Ophiactis savignyi Muller and Troschel, 1842
PHYLUM BRYOZOA	
Class Gymnolaemata	
Family Bugulidae	
	Bugula neritina Linnaeus, 1758
	Bugula robusta MacGilivray, 1869
	Holoporella pilaefera Canu & Bassler, 1929
Family Chorizoporidae	
	Rhamphostomella argentea Hincks, 1881
Family Scrupocellariidae	
	Scrupocellaria cf. sinuosa Canu & Bassler, 1927
Family Hippopodinidae	
	Hippopodina feegeensis Busk, 1884
Family Schizoporellidae	

	Schizoporella errata Waters, 1878
Family Vesiculariidae	
	Amathia distans Busk, 1886
Family Watersiporidae	
	Watersipora edmondsoni Soule & Soule, 1968
SUBPHYLUM UROCHORDATA	
Class Ascidiacea	
Suborder Aplousobranchia	
Family Didemnidae	
	Diplosoma listerianum Milne-Edwards, 1841
Suborder Phlebobranchia	
Family Ascidiidae	
	Phallusia nigra Savigny, 1816
	Ascidia syndneiensis
Suborder Stolidobranchia	
Family Styelidae	
	Botrylloides simodensis Saito and Watanabe, 1981
	Symplegma brakenhielmi Michaelsen, 1904
	Polyandrocarpa sagamiensis Tokioka, 1953
	Eusynstyela hartmeyeri Michaelson, 1904
	Styela plicata Lesueur, 1823
	Styela clava Herdman, 1882
Family Pyuridae	
	Microcosmus exasperatus Heller, 1878
	Herdmania momus Savigny, 1816

Papahānaumokuākea Marine National Monument
Compliance Information Sheet

1.Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant):

Scott Godwin(Chief Scientist, PI)
Brian Hauk (Research Diver)
Cori Kane (Research Diver)
Paula Ayotte (Research Diver)
Jason Helyer (Research Diver)
Holly Bolick (Research Diver)
Trisha Soares (Research Diver)
Senifa Annandale (Research Diver)
Laura Knight (Research Diver)
Jackie Troller (Research Diver)
LTJG Adrienne Hopper (NOAA officer, coxswain)
Eunice Summers (Data Manager)

2. Specific Site Location(s): (Attach copies of specific collection locations): Nihoa Island, Mokumanamana Island, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, and Midway Atoll

3. Other permits (list and attach documentation of all other related Federal or State permits): None

3a. For each of the permits listed, identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation. None

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information): There is an allocation of 30 days at sea aboard Hi`ialakai from NOAA's Office of Marine and Aviation Operations, and the RAMP effort is a line item in the budget of the Papahānaumokuākea Marine National Monument.

5. Time frame:

F-2b

Activity start: July 22
Activity completion: August 19

Dates actively inside the Monument:
From: July 23
To: August 18

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application:

Personnel schedule in the Monument: The following personnel will be present at all sites listed in Section 2

Scott Godwin(Chief Scientist, PI)
Brian Hauk (Research Diver)
Cori Kane (Research Diver)
Paula Ayotte (Research Diver)
Jason Helyer (Research Diver)
Holly Bolick (Research Diver)
Trisha Soares (Research Diver)
Senifa Annandale (Research Diver)
Laura Knight (Research Diver)
Jackie Troller (Research Diver)
LTJG Adrienne Hopper (NOAA officer, coxswain)
Eunice Summers (Data Manager)

6. Indicate (with attached documentation) what insurance policies, bonding coverage, and/or financial resources are in place to pay for or reimburse the Monument trustees for the necessary search and rescue, evacuation, and/or removal of any or all persons covered by the permit from the Monument: This is an activity carried out by the federal government, which is a self-insured entity. Therefore, all included under this permit are covered.

7. Check the appropriate box to indicate how personnel will enter the Monument:

X Vessel
☐ Aircraft

Provide Vessel and Aircraft information: NOAA R/V Hi'ialakai

8. The certifications/inspections (below) must be completed prior to departure for vessels (and associated tenders) entering the Monument. Fill in scheduled date (attach documentation):

All of the following inspections will take place between July 7-20, 2011
☐ Rodent free, Date:
☐ Tender vessel, Date:
☐ Ballast water, Date:
☐ Gear/equipment, Date:
☐ Hull inspection, Date:

9. Vessel information (NOTE: if you are traveling aboard a National Oceanic and Atmospheric Administration vessel, skip this question):
Vessel name:
Vessel owner:
Captain's name:
IMO#:
Vessel ID#:
Flag:
Vessel type:
Call sign:
Embarkation port:
Last port vessel will have been at prior to this embarkation:
Length:
Gross tonnage:
Total ballast water capacity volume (m3):
Total number of ballast water tanks on ship:
Total fuel capacity:
Total number of fuel tanks on ship:
Marine Sanitation Device:
Type:

Explain in detail how you will comply with the regulations regarding discharge in the Monument. Describe in detail. If applicable, attach schematics of the vessel's discharge and treatment systems:

Other fuel/hazardous materials to be carried on board and amounts:

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type:

VMS Email:
Inmarsat ID#:

* Individuals MUST ENSURE that a type-approved VMS unit is installed and that its automatic position reports are being properly received by the NOAA OLE system prior to the issuance of a permit. To make sure your VMS is properly configured for the NOAA OLE system, please contact NOAA OLE at (808) 203-2503 or (808) 203-2500.

* PERMITS WILL NOT BE ISSUED TO INDIVIDUALS ENTERING THE MONUMENT VIA VESSEL UNTIL NOAA OLE HAS CONTACTED THE MONUMENT PERMIT COORDINATOR WITH A 'POSITIVE CHECK' READING.

10. Tender information:

On what workboats (tenders) will personnel, gear and materials be transported within the Monument? List the number of tenders/skiffs aboard and specific types of motors:

10m launch (diesel inboard)
8m launch (diesel inboard)
17-ft rigid hull inflatable (gas outboard)
17-ft inflatable (gas outboard)
17 ft Safeboat (gas twin outboard)

Additional Information for Land Based Operations

11. Proposed movement of personnel, gear, materials, and, if applicable, samples: N/A

12. Room and board requirements on island: N/A

13. Work space needs: N/A

DID YOU INCLUDE THESE?

- ☐ Map(s) or GPS point(s) of Project Location(s), if applicable
- ☐ Funding Proposal(s)
- ☐ Funding and Award Documentation, if already received
- ☐ Documentation of Insurance, if already received
- ☐ Documentation of Inspections
- ☐ Documentation of all required Federal and State Permits or applications for permits

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

May 13, 2011

TO: Division of Aquatic Resources File

THROUGH: William J. Aila Jr., Chairperson

FROM: Francis Oishi
Division of Aquatic Resources

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT RESEARCH PERMIT TO SCOTT GODWIN, NOAA OFFICE OF NATIONAL MARINE SANCTUARIES, PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT, FOR ACCESS TO STATE WATERS TO CONDUCT REEF ASSESSMENT AND MONITORING ACTIVITIES UNDER PERMIT PMNM-2011-022.

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

Project Title:
Papahānaumokuākea Marine National Monument Research Permit to Scott Godwin, NOAA Office of National Marine Sanctuaries, Papahānaumokuākea Marine National Monument, for Access to State Waters to Conduct Reef Assessment and Monitoring Activities

Permit Number: PMNM-2011-022

Project Description:
The research permit application, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State waters between July 23, 2011 and August 31, 2011.

This is an effort to conduct reef assessment and monitoring activities throughout the Monument, as part of the Pacific Reef Assessment and Monitoring Program (RAMP). The primary research groups of the program are algae, coral and coral disease, invertebrates, and fish. Activities to assess these groups would include rapid ecological assessments of corals, macro-invertebrates, fish, and algae.

These activities are in direct support of the Monument Management Plan's priority management needs 3.1 – Understanding and Interpreting the NWHI, through action plan 3.1.1 – Marine

F-2c

Conservation Science. This action plan includes a strategy to "Continue monitoring of shallow-water coral reef ecosystems to protect ecological integrity".

Activities to support marine conservation science in the NWHI are addressed in the Monument Management Plan Environmental Assessment (December 2008) which resulted in a FONSI, or a finding of no significant impact. This EA specifically covers field activities, such as those being proposed, that will "characterize shallow-water marine habitats" (PMNM MMP Vol 2, p.70).

Consulted Parties:
The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March 10th, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Exemption Determination:
After reviewing HAR § 11-200-8, including the criteria used to determine significance under HAR § 11-200-12, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit, including monitoring and collection activities, have been evaluated as a single action. As a preliminary matter, multiple or phased actions, such as when a group of actions are part of a larger undertaking, or when an individual project is precedent to or represents a commitment to a larger project, must be grouped together and evaluated as a single action. HAR § 11-200-7. Since this permit involves an activity that is precedent to a later planned activity, i.e. the continuation of reef monitoring activities, the categorical exemption determination here will treat all planned activities as a single action.

2. The Exemption Class for Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. Chapter 343, HRS, and § 11-200-8, HAR, provide for a list of classes of actions exempt from environmental assessment requirements. HAR §11-200-8.A.5. exempts the class of actions which involve "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." This exemption class has been interpreted to include "surveys, censuses, inventories, studies, photographing, recording, sampling, collection, culture and captive propagation of aquatic biota", such as those being proposed.

The proposed collection activities here appear to fall squarely under the exemption class #5, exempt item #5 as described under the former Fish and Game Division exemption list published in January 19, 1976. As discussed below, no significant disturbance to any environmental resource is anticipated in the sampling of Monument resources. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if "the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment." HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

The activities would be a continuation of work previously conducted by this applicant and others, which involved monitoring and collection activities to characterize shallow-water marine habitats. Permits have been issued for this study each year since 2006, and it is likely that future requests for permits will be received to continue this work. No deleterious effects have resulted from these activities in the past. With this in mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities would be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities.

The activities would be conducted from the NOAA Ship HI'IALAKAI (PMNM-2011-009) during its July/August cruise. The following table lists additional activities that are anticipated to take place on this cruise pending approval of permit applications.

Table 1. Concurrent Projects Aboard NOAA SHIP HI'IALAKAI

Permit	Purpose and Scope	Location
PMNM-2011-009 NOAA Ship HI'IALAKAI	The permit allows NOAA Ship HI'IALAKAI entry into PMNM. Personnel aboard the vessel will be permitted under separate permits.	All locations
PMNM-2011-018 Meyer (proposed)	The proposed action is to allow collection of reef fish and tagging of top predators as well as acoustic receiver deployment	All locations
PMNM-2011-020 Aeby (proposed)	The proposed action is to allow collection of reef fish and corals for disease studies as well as monitoring for diseased corals	All locations
PMNM-2011-021 Winn (proposed)	The proposed action is to allow water sampling.	All locations
PMNM-2011-023 Au (proposed)	The proposed action is to allow deployment and retrieval of acoustic receivers.	Kure, Lisianski, FFS, Nihoa
PMNM-2011-025 Bowen (proposed)	The proposed action is to allow collection of reef fishes and invertebrates.	All locations
PMNM-2011-026 Rossiter (proposed)	The proposed action is to allow collection of live coral and fish.	All locations
PMNM-2011-027 Thomas (proposed)	The proposed action is to allow collection of algae, bivalves and water samples.	All locations
PMNM-2011-032 Donahue (proposed)	The proposed action is to allow collection of corals, deploy coral settlement blocks, and measure water chemistry.	All locations

Three proposed activities include collections of similar coral species, but the intent of Donahue and Rossiter's collections do not overlap with the stated needs for coral collections by the Applicant. Proposed collections by Aeby have the potential to collect similar specimens of diseased corals. The applicant's proposed collections would be opportunistic rather than targeted. While there is a slight potential for duplicative coral sampling, the benefit of these collections aiding Monument management in identification of new coral diseases in the NWHI outweighs that minimal risk.

One proposed activity includes the collection of marine algae, but these collections are for distinct, known species of algae and thus will not duplicate collection efforts by the Applicant. Two proposed activities include the collection of invertebrate species, but as with algae, these species do not overlap with the proposed collections of invertebrates by the Applicant. The culmination of these permits, and their disparate activities, occurring throughout the Monument over a 4-week period, is not anticipated to have significant cumulative impacts. The NOAA Ship OSCAR ELTON SETTE (PMNM-2011-008) may also be in the Monument during this time frame facilitating needs of the monk seal camps under the management permit (PMNM-2011-001).

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably be Minimal and Insignificant Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all research activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures.

Conclusion. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

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William J. Aila Jr. Date
Board of Land and Natural Resources